REMARKS/ARGUMENTS

The claims are 4-14. Claims 13 and 14 have been amended to better define the invention and to incorporate subject matter previously appearing in claims 2 and 3. Accordingly, claims 2-3 have been canceled and claim 5 has been amended in view of the amendment to claim 14. Support for the claims may be found, *inter alia*, in the disclosure at pages 16-18. Reconsideration is expressly requested.

Claims 10-13 were rejected under 35 U.S.C. 102(b) as being anticipated by *Noble U.S. Patent No. 1,508,713*. Claims 4, 7, and 10-14 were rejected under 35 U.S.C. 102(b) as being anticipated by *Lorentzen U.S. Patent No. 5,521,355*. The remaining claims were rejected under 35 U.S.C. 103(a) as being unpatentable over *Lorentzen* alone (claims 8 and 9), *Lorentzen* in view of *Brown GB 2 120 692* (claims 2, 3, 5 and 6), or *Noble* in view of *Brown* (claims 2 and 3).

The Examiner has also taken the position that each of *Noble* and *Lorentzen* discloses a wire buffer storage, that *Brown* explicitly teaches a sensor placed in front of a drive unit, and therefore in the Examiner's view, *Noble* or *Lorentzen* in view of *Brown* fully meets the recitation of "a sensor to capture the welding wire stored in a wire buffer storage" and the "sensors arranged in front of the drive unit", viewed in the conveying direction of the welding wire."

This rejection is respectfully traversed.

As set forth in claims 13 and 14 as amended, Applicants' invention provides a welding torch having a central axis including a torch body, a drive unit for conveying a welding wire at different wire-conveying speeds or for a forward/rearward wire conveyance, a hose pack connected at a connection region to the torch body at an angle of up to 90 degrees relative to the central axis, a wire buffer storage arranged immediately after the connection region within the torch body, and a sensor to detect the welding wire stored in the wire buffer storage. The wire buffer storage contains a portion of the welding wire, and

the sensor is arranged in front of the drive unit, viewed in the conveying direction of the welding wire.

As recited in claim 13 as amended, the portion of the welding wire contained in the wire buffer storage follows a curved course between the connection region and the drive unit and is adjustable by a change of the curved course.

As recited in claim 14 as amended, the wire buffer storage is formed from a wire core or a guide hose that follows a curved course between the connection region and the drive unit, and the portion of the welding wire contained in the wire buffer storage is adjustable by a change of the curved course.

As more specifically recited in claim 5 as amended, the sensor is arranged to detect the movement of the wire core in a freely movable end region of the wire core. This feature is discussed in the paragraph bridging pages 17-18 of Applicants' disclosure.

Thus, with Applicants' welding torch as recited in claim 5 as amended, the wire core 32 conducting the welding wire 13 is unguidedly arranged immediately after the coupling device 24 and the wire core 32 follows a curved course 42, which means that a wire buffer storage 43 is formed by the curved course 42. It is the task of the wire buffer storage 43 to take up, or deliver, excess welding wire 13. A change in the central radius 44 of the curved course 42, at the same time, causes a longitudinal movement of the end of the wire core 32. The sensor 39, for instance, via a change in the inductance of the coil 41, enables the detection of the condition of the wire buffer storage 43 and the conclusion of the radius 44 of the curved course 42.

Applicants' Amendment in Response to Office Action filed August 18, 2008 already sets forth the reasons why neither *Noble* nor *Lorentzen* discloses or suggests a wire buffer storage within a welding torch as recited in Applicants' claims 13 and 14. It is respectfully submitted that Applicants' claims 13 and 14, as amended, now include additional features which further distinguish Applicants' welding torch from *Noble* and *Lorentzen*, including a sensor arranged in front of the drive unit, viewed in

the conveying direction of the welding wire, to detect the welding wire stored in the wire buffer storage.

Although the Examiner has cited *Brown* as teaching a sensor element 10 arranged in front of a drive unit (capsan feeder 3) to provide rapid and accurate acceleration/retardation of the wire feed immediately adjacent the arc location, it is respectfully submitted that *Brown's* nichrome wire 10 is in an apparatus that contains no wire buffer storage as recited in Applicants' claims 13 and 14 as amended and therefore would not be considered by one skilled in the art as a basis for improving the arrangements of *Noble* or *Lorentzen*.

Brown shows an apparatus for supplying a welding wire to an arc welding site including a reserve loop in the wire between the store and the welding site. The size of the reserve loop decreases in response to demand for wire at the arc welding site. By this feature a continuous movement of the welding wire despite variations in the inertia of the store should be achieved. It is respectfully submitted that *Brown's* reserve loop cannot be compared with Applicants' wire buffer storage as recited in

claims 13 and 14 as amended which is arranged within or integrated in the welding torch and enables a fast change of the direction of wire conveyance.

In any event, there is no disclosure or suggestion in *Brown* (or in *Noble or Lorentzen*) that the arrangements of *Noble* or *Lorentzen* would be benefitted by modification with the sensor of *Brown*.

Moreover, there is no disclosure or suggestion in any of these references of a sensor as recited in claim 5 as amended arranged to detect movement of the wire core in a freely end region of the wire core. As discussed previously, the wire buffer storage takes up or delivers excess welding wire. A change in the central radius of the curved course of the wire buffer storage causes a longitudinal movement of the end of the wire core so that the detection of the condition of the wire buffer storage and the conclusion of the radius of the curved course can be detected by the sensor.

Accordingly, it is respectfully submitted that claims 13 and 14 as amended, together with claims 9-12, which depend on claim 13, and claims 4-8, which depend directly or indirectly on claim 14, are patentable over the cited references.

In summary, claims 2-3 have been canceled, and claims 5 and 13-14 have been amended. In view of the foregoing, it is respectfully requested that the claims be allowed and that this case be passed to issue.

Respectfully submitted,
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